N. A. C. A. BULLETIN

Vol. XXVII, No. 23 August 1, 1946

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EDITORIAL DEPARTMENT NOTE

The making of textiles is an ancient art, and the industry was one of the first to succumb to the onrush of the industrial revolution. Strangely enough, cost development in the industry lagged, chiefly because production was carried on in many independent and relatively small units. The modern tendency for centralization of many mills under a common management has spurred cost research in the industry and has resulted in greatly improving cost accounting techniques. As in so many other fields, standard cost techniques have proved of great value in overcoming the accounting problems posed by the technical difficulties peculiar to textile manufacture.

GEORGE C. LYON, author of the first article, was born in Arlington, N. J., in 1902. He was educated in the public schools of Kearny, N. J., Albany, N. Y., and Newark, N. J. He attended Syracuse and New York Universities. For some years he was engaged in the fire insurance business as inspector, rating expert, special agent, and broker. He entered the textile field in 1935 and since 1937 has been associated with the Limerick Yarn Mills of Limerick, Me., and Manchester, N. H., as Secretary of the Company and Cost Supervisor. Mr. Lyon has been active in the Association. He is a Past President of the Maine Chapter, Past National Director and currently Program Director of the New Hampshire Chapter.

In these hot summer days it is pleasant to contemplate an ocean voyage. But behind the alluring image of life on the high seas, as pictured in the travel folders, stands the grim specter of the accountant. Operating a steamship line is a business usually highly competitive, and operating costs must be carefully watched.

ARTHUR B. POOLE, author of the article on "Steamship Accounting," takes us behind the scenes and presents a picture of the operating and accounting problems present in that industry. Mr. Poole is Vice President, Treasurer, and Director of American President Lines, Ltd., of San Francisco, California. Born in St. Paul, Minn., he obtained a Bachelor of Arts degree from the University of Minnesota in 1917. He served in the U. S. Navy from 1917 to 1920, rising to lieutenant. He entered public accounting in 1920, becoming certified in his native state. From 1927 to 1936 he was in the motion picture industry in various capacities: Assistant to Treasurer, R. K. O. Radio Pictures; Comptroller, Keith-Albee-Orpheum Corp.; Comptroller-Treasurer, Vice President, Director, Pathe Film Corp.; Studio Consultant, Paramount Pictures, Inc. For a year he was financial consultant to American Newspapers, Inc. In addition to his duties at American President Lines, Mr. Poole is Consulting Professor of Ocean Transportation at Stanford University.

There is more than meets the eye in designing printed forms and maintaining control over them. Problems of obsolescence of forms, proper sizes, control over their issue, numbering systems, etc., are all matters that must be properly attended to.

CHARLES F. MARGESON, author of the last article in this issue, is a resident of Hartford, Conn. He attended the public schools in that city, and is a graduate of LaSalle Extension University. He received his first business experience at the Hartford Works of the Underwood Corp., where he was employed from 1935 to 1940 in various capacities in the cost and plant accounting departments. Following a season with the public accounting firm of Warren M. Brown, CPA, he joined the Henry & Wright Mfg. Co. in 1941 as Accountant, where he is presently employed as Assistant to the Treasurer.

Articles published in the *Bulletin* present many different viewpoints. In publishing them the Association is not sponsoring the view expressed, but is endeavoring to provide for its members material which will be helpful and stimulating. Constructive comments are welcomed and will be published in the Forum Section of the *Bulletin*.

This *Bulletin* is published semimonthly by the National Association of Cost Accountants, 385 Madison Ave., New York 17, N. Y. Subscription price, $10.00 per year. Entered at the Post Office, New York, N. Y., as second-class matter August 28, 1925, under the Act of March 3, 1879.

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NATIONAL ASSOCIATION OF
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AUGUST 1, 1946

A STANDARD COST APPLICATION IN THE TEXTILE INDUSTRY

By George C. Lyon, Secretary and Cost Supervisor,
Limerick Yarn Mills,
Manchester, N. H.

A FREQUENTLY heard objection to the use of standard costs in some industries is the one that states flatly that "standard costs will not work" because of some special conditions peculiar to that industry. While it is true that the original standard cost methods were developed in and for the highly mechanized and automatic machine industries, it is equally true that the use of standard costs or of the standard cost method can be adapted to fit the needs of almost any industrial accounting system. During the years just passed, under emergency conditions, many organizations found it necessary to adopt some variation of standard cost practices to enable them to obtain current cost in information as quickly and correctly as possible, and to distribute and analyze the elements of cost between various departments, divisions, and product. One example that may be cited is accounting for renegotiation proceedings, where correct distribution of costs between government and nonrenegotiable business was of vital importance and where errors inherent in the former casual over-all methods might, and often did, result in actual losses to the company involved in these proceedings.

It has been a rather common fallacy to draw a line between so-called job costs and standard costs, and to assume that the two methods were widely apart and could not be used together or to supplement each other. This assumption, of course, is far from the truth. Job costing is extremely important in certain types of industry and has one advantage in that it is easily understood by laymen and requires no long explanation of how actual costs are arrived at. On the other hand, job costing simply will not work in many industries and it was in such organizations that the standard cost method had its inception and early development. There are also many industries where job costing is not only necessary, but convenient, and where at the same time standard costs, or at least standard cost methods, can be used to great advantage to supplement job costing and to support forecasts, esti-

mates, and burden allocation. The present article attempts to apply the standard cost method to an industry where job (or lot) costing has always been a dependable and convenient method for determining actual costs, but where standard cost applications are of great value. They serve to measure probable costs far in advance of actual production and to provide a reliable method for pricing, forecasting, budgeting, and burden distribution.

Job Order Control

In the textile industry, and particularly in the worsted and woolen division of this industry, there are certain conditions of manufacturing that require identification of each lot of raw material that goes into process. Entirely aside from any accounting requirements it is necessary to run each lot, large or small, through the various processes under an identifying number and to segregate production statistics in the same manner. This is necessary because of the inherent variations in the quality of the same general class of raw materials and because manufacturing specifications may vary to compensate for variations in quality.

Because of this control method in which lots are identified and production records kept on each lot it is natural that cost records, so far as direct costs are concerned, should also be kept in the same manner, and the result is an accumulation of prime cost on a job or lot cost basis. The clerical labor involved in keeping costs in this manner is not unduly burdensome, as production records must be kept and by the use of multiple purpose forms the cost and production clerks in the various cost centers keep both production and cost records segregated by lots in a simple manner, using machine hours, pounds, and hours worked.

Reporting Production

These cost and production records are delivered to the cost department at the close of each eight-hour shift and are posted to individual controls, one of which is a production report that is then delivered to the production department. By this dual control, the same production figures used for cost finding are also used for scheduling and there is no conflict between the two departments due to discrepancies in the figures used.

Job Cost Ledger

Exhibit 1, Process Production Record, is the master control for actual cost accumulation. Like so many forms that have been in use for a number of years and have been developed from a modest beginning, the designation is not wholly correct, as this record is actually a complete job cost ledger sheet, showing sales and all cost elements with the exception of burden.

This form is entered into the record when the production order is issued and is identified by a lot number, for reasons explained above. We will follow an imaginary lot from the initial entry through the processing of raw material, to the close of an accounting period, and show the method by which the actual costs are accumulated.

Lot 45000 is a 50,000-pound production order for a 1/18 knitting yarn, and for purposes of simplification we will not post all of the data, but enough to demonstrate the method. The original posting is from a production order and is entered on the front at the top of the sheet. After the entry of the production order the next posting is the detail of the raw material issued to process, by a requisition from production to stores (Exhibit 2). The requisitions are serially numbered, bound into a cover, and constitute a prime cost record. On the left side of this form the storekeeper enters the actual physical weight of the stock issued to process, with the proper identification. On the right side of the form the cost department enters the inventory charges, which are on a standard cost basis, as will be shown later. The actual weights are then posted on the front of the process production record and the inventory charges are posted on the reverse. The correct entries are also made to the raw material inventory cards from the same form. Raw material postings are made on a daily, rather than a shift, basis.

Accumulating Costs

Upon the issuance of raw material the lot is in process. At the end of the week the first production figures are accumulated from the daily reports and posted by process on the front of the report, and the matching direct labor accumulations are posted on the reverse side. We will not show the various forms used for accu-

EXHIBIT 1 (Face)

EXHIBIT 1 (Reverse)

mulating daily production and cost as they are merely accumulation sheets of the usual type, but we wish to point out that production, direct labor cost, and raw material charges are available daily and it is a simple matter to determine the status of each lot from a production or cost standpoint, at the end of each shift. In actual practice production and costs are posted weekly.

At the stage illustrated, the lot has been in process from November 26th and is at the end of the week ending December 8th. Some finished goods have been produced and two shipments made. Finished goods reports and billings are posted daily, carrying out the intended purpose of having a complete and current direct cost and production record available daily. This is usually summarized and reported in some phases on a weekly basis, at the end of an accounting period, and completely summarized and costed when the lot is completed.

It can be seen that this record is therefore a complete job cost sheet and, except for burden, contains all elements of costs on an actual basis. Even the waste recovered is posted, and by applying standard waste recovery factors we can determine the net cost of raw material, the yield in finished goods, sales, and in-process inventories. This record is also used to take off the in-process inventories by a simple and reliable method and has eliminated the costly, burdensome, and unreliable physical inventory of goods in process. We take physical inventory of raw material and finished goods quarterly, but the in-process inventories are always drawn off this record, costed, and calculated on a standard cost basis. Variances incurred are written off in the current period by the usual method of opening and closing at standard. We will not discuss the details of the method employed in taking off and costing the in-process inventory, except to say that despite the accumulation of actual costs and production figures at hand, there is no reliable method of costing an in-process inventory except through the use of standard cost methods.

We have now developed, in a rather superficial manner, the methods used to accumulate actual costs on the familiar job or lot cost basis, and are ready to discuss the application of standard cost methods to the system.

Raw Material Standards

The application of standard costs to raw materials is a relatively simple procedure because of the special nature of the industry under study. Being the so-called special-order type of business, no goods are manufactured for stock or inventory and no raw materials are purchased except to cover existing orders. There is one important exception to this general statement which concerns the purchase of raw materials in advance because of favorable market conditions, or the intentional failure to cover orders taken, again because of market conditions. This type of operation is not, however, a normal function of manufacturing and is usually segregated from the manufacturing costs by treatment as a financial or management phase.

Material Price Standards

Even in cases where inventory or stock is manufactured in anticipation of orders the price of the finished product moves in sympathy to the price of raw materials, and it is therefore important to determine the cost of raw material used in relation to the price of the finished product. This is done by using the current market price of the raw material on the day the sales order is entered (whether there is an actual purchase of raw material or not) as the standard cost of the raw material required to fill the order, or group of orders taken. The same standard price is used in figuring prices, in forecasting, and for all other cost applications. In actual practice, of course, the exact raw material supposedly purchased to fill an order is seldom the raw material actually issued to process.

Raw materials taken into the raw material inventory are classified for grade and quality and entered at the actual invoice price. Issues to process are made at the standard price referred to above and the variances developed at the end of each period are written off as raw material costs. In this manner the cost of raw material issued to each lot is in proper relation to the sales price of the finished product, and manufacturing is not charged with variances due to market fluctuations or purchasing policy. It should be noted, however, that except in periods of wide market fluctuations the variances incurred are not large and do not have an appreciable effect on the net results at the end of each period.

RECORD OF RAW STOCK ISSUED — Nº 24104

DATE 2/20/45

STOCK	QUALITY OR COUNT	VENDOR	BATCH NO. LOT NO. COMBING NO.	COLOR	LOT NO.
WOOL	56s	DT	C324	NATURAL	4500

TOPS: NET WEIGHT TO DRAWING

SET NO.	BALE NO.	NET	TOTAL
4	251 - 260	3910	
5	261 - 270	3881	
6	271 - 280	3209	
			10 000

COTTON

TICKET NO.	CASE NO.	NET	TOTAL

INVENTORY CHARGES

STOCK	LOT NO.	POUNDS	PRICE	AMOUNT
MOHAIR				
WOOL	C324	9942	1.20	11930 40
RAYON				
ALPACA				
BLEND	TOTAL			
DYE CHARGES				
TOTAL CHARGES				
CHARGE LOT NO.				
BALANCE SEE NO.				
COTTON				
DYE CHARGE				
TOTAL CHARGE				

LOT COMPLETE		ENTERED PROCESS	CVB 11/30
STOCK COMPLETE	✓		

ENTERED	INVENTORY	INVOICE	PROCESS	POSTED
✓	✓		✓	CVB.

EXHIBIT 2

Material Quantity Standards

Quantity standards are based on two recognized methods of handling wool and wool tops. On the raw material requisition record illustrated (Exhibit 2), the actual weight of the raw material issued is posted in the left-hand section as 10,000 lbs., whereas the actual inventory charges are entered and priced at 9942 lbs. This is a method used to compensate for moisture losses common in all textile fibres. The invoices for raw material purchased are priced on the "regain" basis, which assumes a test for moisture content to indicate the condition of the material at the time of shipment and sale, and applies a standard regain factor to the dry weight to find a standard weight. On the inventory control the moisture content of each lot purchased is entered, together with a factor to convert the actual issues to the regain basis, and a moving average moisture content accumulated, so that each issue is converted to the same regain basis on which it was originally purchased. This method avoids large losses or gains due to the condition of the raw material, and also charges into process the effective *cost* weight of the stock issued. Finished goods are sold on the same "regain" basis, so that the application of an adjustment from actual weight to regain weight is made at the beginning and end of the run.

The second application of quantity standards is on the basis of yield from a given quantity of raw material, always using the regain weights. Standard yields are established for various qualities and specifications and if the production order calls for 50,000 lbs. of finished product, as in the illustration, and the standard yield expectancy is 90 per cent, the total raw material requisition is for 55,555 lbs. Obviously the exact yield obtained is never 90 per cent, but the price quoted and the forecasted cost of sales are based on standard yields and variances developed are analyzed and shown in detail. In the development of standard yields, the most reliable method is statistical analysis of past experience in sufficient volume, properly classified, and here the job cost method gives the necessary experience data. It is possible to determine standard yields for an entirely new quality or grade by comparison with similar grades, but in all cases some kind of historical data are invaluable. Over a long period and with a great volume of experience, the present standard yields in use show only minor variances from the actual results and are used without any reservations in pricing and forecasting.

Waste Recovery

Another phase of quantity standards is in connection with the waste recovery. In handling wool, waste is an important factor, as the value of the waste recovered is an important element of cost. Here again, sufficient volume of past experience, properly classified, is important. By the use of historical data we determine waste recovery in pounds, and by application of current market prices for waste sold a cost standard can readily be determined. Waste recovery, together with the variances from standard, is treated as a part of raw material costs and is tied in with the general accounts through the usual inventory methods.

All of the raw material standards are important, as they represent from 60 per cent to 80 per cent of the total cost of the product. In actual practice variances from standard cost, both as to quantity and waste recovered, are not large and the net cost of raw materials, determined by the use of these standards, used in pricing and forecasting, is kept within very close limits.

Direct Labor Standards

In the particular type of industry under discussion the cost of direct labor is a very important factor, and unless carefully controlled can seriously affect the net result in any period, especially in pricing individual orders or production runs under ceiling price restrictions and in periods of close competition. Generally speaking, the cost of raw materials is not susceptible to as close control, except in regard to yield and waste, and it is in the direct labor and, to a lesser degree, the burden charges, that profit is most seriously affected. Although we have shown that actual labor costs are carefully accumulated and classified, the control of these costs would be impossible without some application of the standard cost theory.

In the system under discussion direct labor is defined as all labor directly concerned with the manufacture of the product, and this includes supervisory labor in the lower brackets as well as auxiliary labor that can be conveniently segregated and allocated to individual production orders and lots. This is a departure from the usual practice but has proven very successful in controlling all labor cost measured by production. Thus, we have so-called "direct-indirect labor" as well as the usual type of indirect labor which is treated as burden and which includes maintenance and repair, watchmen, firemen, cleaners, stock room clerks, etc.

Setting Labor Standards

Standards for direct labor, as defined above, are derived from mechanical data, time studies, and work load applications, such information being supplied by the production and time study departments, which are entirely separate from the cost department. Two separate checks are made of all standards, one by the time study department under the supervision of the production department, and the other by the cost department. The time study department runs continuous checks on production and is constantly engaged in refining and revising the existing standards. The cost department checks all standards obtained by the so-called engineering method against historical costs and statistical analyses. It revises standards to reflect marked changes in specifications, methods, or wage rates, or any other reason that can be demonstrated will affect costs. Perhaps from prejudice, the cost department

relies more on the actual method of checking and proving standards than on the engineering method. Where the cost department has the heavy responsibility for making prices, or for furnishing information on which prices are made, it is of the utmost importance that the standards used are not only correctly derived but that they reflect a practical goal rather than the ideal performance sometimes indicated by time study methods. It makes a rather unfavorable impression on management to contend that certain standards must be attained because time study and engineered standards prove they can be made, when the actual results in terms of profit or loss demonstrate plainly that the ideal standards have never been attained and that a price based on those standards does not produce a profit.

Direct labor standards are set on each production order, as distinguished from individual lots. Production orders may represent a continuous run of many lots of the same grade and specifications over a long period, or an intermittent production of a staple type. When a definitely new type of product is sold, a new production order is set up and the standards calculated on the form illustrated in Exhibit 3. Revisions are made only when specifications change or other marked changes occur: in general, a standard once set remains constant until some radical change is made. Minor variations in methods to improve quality or increase production are not in themselves reasons for revising the standards, nor are they reasons for lowering or increasing the going sales prices. Such changes are reflected in the variances developed and in the net results. After a long period, if a certain production order has run consistently off standard and the reasons for the unfavorable variance has been carefully analysed, the standards will be revised to reflect current conditions. This is usually done at the end of a year and only occasionally during the year.

Setting Production Standards

In Exhibit 3 the calculation of the production standard is done in the left-hand column. All pertainent data are shown; copies of this form are available to production and time study departments and to the direct supervisors responsible for costs. The illustration is intentionally simplified to demonstrate what might otherwise seem to be a complicated matter. We will examine the

LIMERICK YARN MILLS

STANDARD COST APPLICATION

COUNT: 1/18 | DESCRIPTION: WOOL | P. O. NO.: K155

DATE: 6/12/45 | REVISION: | DIVISION: M | CLASS: KNITTING | STYLE: 6065

STANDARD PRODUCTION			STANDARD PAYROLL COST					COST PER POUND		
PROCESS	DATA	PER DAY	DISTRIBUTION	RATE	AMOUNT	TOTAL		PROC.	LOSS	FIN.
1 DRAWING GRAIN WGT.	250		INDIRECT 12 SETS		72.00					
PRODUCTION PER ROVER	200		INDIRECT PER SET			6	00			
ROVERS PER SET	4		OPERATORS PER SET: 5	.70	5.60	28	00			
PRODUCTION PER SET		800	TOTAL COST PER SET:			34	00	0425	4%	0442
2 SPINNING COUNT	18		8 SPINNERS 5 SIDES	70	5 60	44	80			
CAP— TWIST	10		0 SPINNERS 0 SIDES							
RING— X C/T FACTOR	180		TOTAL SPINNERS 8			44	80			
PRODUCTION CONSTANT	423040		1 BOSS DOFFER	70	5 60	5	60			
100% PRODUCTION	2350		4 DOFFERS	60	4 80	19	20			
STANDARD EFFICIENCY	75%		TOTAL DOFFERS 5			24	80			
STANDARD PRODUCTION	1763		INDIRECT— 20 FRAMES			18	55			
STANDARD MACHINE HRS.	160		PAYROLL NO. 3							
LBS. PER MACHINE HR.	11.02									
PRODUCTION— 20 FRAMES		1763	TOTAL COST			88	15	05 00	1%	0505
3 SINGLE WINDING			WINDERS MINIMUM RATE	70	5 60					
4 CONE WINDING	FG		INDIRECT— 1 WINDERS		1 20					
LBS. PER OPERATOR		161	TOTAL COST PER OP.			6	80	0422	FIN	0422
5 TWISTING COUNT			TWISTERS SIDES							
TWIST C/T FACTOR			INDIRECT FRAMES							
PRODUCTION CONSTANT			PAYROLL NO.							
100% PRODUCTION										
STANDARD EFFICIENCY										
STANDARD PRODUCTION										
STANDARD MACHINE HRS.										
LBS. PER MACHINE HR.										
PRODUCTION— FRAMES			TOTAL COST							
6 TWO PLY WINDING			WINDERS MINIMUM RATE							
TWO PLY CONE WINDING			INDIRECT— WINDERS							
LBS. PER OPERATOR			TOTAL COST PER OP.							
7 SPOOLING			SPOOLERS RATE							
8 REELING			REELERS RATE							
LBS. PER MACHINE			INSPECTORS RATE							
LBS. INSPECTED			INDIRECT— FRAMES							
STANDARD PRODUCTION			TOTAL COST							
9 DOUBLER			OPERATORS RATE							
LBS. PER MACHINE			TOTAL COST							
9 WARPING			WARPERS RATE							
LBS. PER MACHINE			INDIRECT— NCHS							
STANDARD PRODUCTION			TOTAL COST							
STANDARD YIELD %	98		TOTAL DIRECT LABOR—FINISHED BASIS							.1369
DYEING LOSS %	—		APPLIED DIRECT BURDEN—RATE: .365							.0445
INVISIBLE LOSS %	2		INDIRECT BURDEN—STANDARD:							.1271
DRAWING WASTE %	4		OTHER ADDITIONAL COSTS:							
FINISHED WASTE %	4		STANDARD COST PER POUND FINISHED:							.3085

(ALL FIGURES FOR STANDARD PRODUCTION AND PAYROLLS ARE ON A ONE SHIFT-EIGHT HOUR BASIS.)

ACTUAL EXPERIENCE DATA

PERIOD	OPERATION	PRODUCT.	HOURS	LBS. P/M/H	STANDARD	
7/1-12/1	SPINNING	286,000	26602	10.75	11.02	PP

BASIC PRODUCTION DATA

	SPINNING	TWISTING
MOTOR SPEED	1750	
MOTOR GEAR	17	
SPROCKET	67	
CYLINDER	10"	
WHORL	1"	
SPINDLE SPEED	4440	
PRODUCTION CONSTANT	423040	
FOR FRAMES	20	

CORRECTIONS AND REVISION: HOLD FOR 1945

CALCULATED BY HQ

EXHIBIT 3

standard for "spinning" which is an important production operation, second in the process line and numbered "2". The "count", 18, is the yarn number and indicates the yardage per pound. The designations "cap" and "ring" are for the method of spinning. The twist is the number of turns per inch in the yarn and is an important factor in production. The "C/T" factor is a convenient method of determining the ideal or 100 per cent possible production. In the lower right-hand corner are the basic production data, furnished by the production department as the standard machine setup. From these data a production constant for a group of machines for a single eight-hour shift is calculated by methods familiar to all textile engineers. The 100 per cent production is the ideal production that is delivered by the front roll of the spinning frame, assuming continuous operation, and is strictly a mechanical formula. It is governed solely by the speed of the machine and the count and twist of the yarn.

At this point the efficiency factor is applied, and it is here that the greatest divergence occurs between engineered standards and observed data. There are numerous factors that affect the efficiency of the machine and determine the amount of yarn delivered to the bobbin, which is the production package. A few may be mentioned, such as filling in the creel with raw stock (roving), stoppages for doffing, breakage, and piecing up the broken threads, and many others. These stoppages are part of the production setup and are calculated in measuring the expected production. Other stoppages in the continuous run of the machine, for repairs, cleaning, or several other unusual occurrences, are deducted from machine production hours and charged off to idle machine time. The efficiency factor is measured by the time study department by periodic observation and calculation of average operator performance by the usual techniques. It is measured by the cost department by a continuous accumulation of actual experience, properly classified and analysed, and applied against a curve of standard efficiency on a statistical basis. The unit of measurement is the machine hour production in pounds, and these data are used only after substantial quantities have been accumulated in the same class. The data are entered from time to time in the lower left-hand table, for reference and to check the standard. In the illustration the variance from standard is too small to have any marked effect on final

cost, and is in line with results actually obtained. An example is a production order that has been running for over 65,000 machine hours, with production of over half a million pounds, on which the actual rate per machine hour was 7.686 pounds against a standard of 7.70.

It is, of course, true that historical proof of this nature is not available on new specifications or new types, but it has been found after several years experience that the efficiency factor runs along a straight line "curve" in ratio to the 100 per cent ideal figure, and it is assumed that what is true of one product of the same general class will be true of another, even though the specifications may differ widely. Historical data are used not only to support the standard established for the same type of product but to demonstrate the reliability of the method. In many cases, of course, the engineered data will be found to be accurate, but to avoid any serious errors in the standards all standards are checked before being used for cost purposes.

Standard Payrolls

The standard production thus calculated is then converted into a daily standard for a specified group of machines, and this figure is divided into the standard payroll cost to obtain the cost per pound. The method used to establish the standard payrolls is easily understood by referring to the illustration in Exhibit 3. The standard payroll is the complement of productive labor allowed for the specified group of machines and includes "spinners" representing true direct labor, "doffers" representing semi-direct labor, and the previously mentioned "indirect-direct labor" which includes supervisors, assistants, yarn boys, oilers, band boys, bobbin setters, and even the clerk who handles the records for the department. These standard payrolls are posted in the departmental production offices and all overseers are familiar with them. They are established after consultation with the production department, the time study department, and the overseers who have agreed to operate the specified number of machines with approximately the standard setup. There are only five different standard payrolls in spinning, and fewer in other departments, so that each overseer arranges his help to fit as nearly as possible the standard allowance.

MANCHESTER

FORM 03

LOT COUNT MATERIAL DYED

DATE STARTED
DATE FINISHED
DATE CLOSED

P. O. NO.:

ORDER	CUSTOMER	PUT UP	POUNDS	PRICE	TOTAL
FINISHED YARN		TOTAL SALES			

TOP USED	PER CENT.	POUNDS	PER POUND	TOTAL
TOTAL				

	TOP	BOTTOM
INVOICED WEIGHT		
NET WEIGHT		
DYE LOSS		

TOTAL YIELD

SPREAD

SHIPMENTS
ODD LOTS
SOFT
ROVING
HARD
SWEEPS

TOTAL WASTE
LOSS OR GAIN
NET COST OF TOP

DIRECT LABOR	ESTIMATE FIN. BASIS	PER POUND	TOTAL
DRAWING			
SPINNING			
SINGLE WINDING			
TWISTING			
WINDING			
SPOOLING			
BEAMING			
REELING			
STEAMING			
OPERATIVES INDIRECT			
TOTAL (UNIT)			
S. B.			
OVERTIME			
S. B.			
TOTAL			

SUMMARY	PER POUND	TOTAL
SALES		
DISCOUNT		
FREIGHT		
COMMISSION		
NET SALES		
COST:—		
MATERIAL		
DIRECT LABOR		
FAC OVERHEAD		
DIRECT OVERHEAD		
INDIRECT OVERHEAD		
TOTAL OVERHEAD		
GAIN OR LOSS (1)		

Purchase price of Top
Net cost of Top per pound
Actual price of Top

Labor cost per lb.
Per count

Gain or Loss (2)

POSTED:
FIGURED BY:
APPROVED:

REMARKS

GAIN OR LOSS (3)

EXHIBIT 4

MANCHESTER- X
LIMERICK-

DIRECT LABOR VARIANCE FROM STANDARD COST
PROCESS PRODUCTION AND PAYROLL COST

REPORT NO. 49

WEEK ENDING 12/8/45

DEPARTMENT RING SPINNING NO.3 — POSTED TO LOT COST X

LOT NO.	DESCRIPTION			PROCESS	STANDARD		ACTUAL		OVERTIME	NET
	COUNT	KIND	TWIST	PRODUCTION	PER LB	PAYROLL	PER LB.	PAYROLL	PREMIUM	VARIANCE
4500	1/16	WOOL	10	11,200	0500	$560.00	.0533	596.96	--	RED -36.36

EXHIBIT 5

Process Costs and Variances

The standard payroll cost divided by the standard production gives the departmental or process cost per pound. This unit is used for developing variances by departments, by shifts, by products, and in some cases by individual machines. This is done daily and summarized weekly, as explained below. The yield factor, previously referred to, again affects the labor cost per pound, and in the illustration the 1 per cent of shrinkage that will occur between spinning and the last process, in this case cone winding, shows the cost per pound for spinning on a finished basis. Variances developed in the finished cost are normally absorbed in the cost of sales but are analyzed and shown on the finished job cost reports, a blank illustration of which is furnished (Exhibit 4).

Weekly Variance Report

Variances developed in the departmental costs are for control purposes only and are shown on the weekly variance report illustrated (Exhibit 5). These variances can be reported daily, but for practical purposes a weekly report is sufficient and is available to the supervisor one or two days after the close of the week. This report also serves as a posting medium for the process production record, for entering process production and actual costs. It is also checked and proved with the weekly payroll and the variance shown on the weekly payroll analysis. The cost payroll is, of course, balanced with the actual payroll and all errors in accumulation and distribution corrected.

Variances occur, of course, on every pound of production, but the aggregate deviation from standard is closely watched and carefully analyzed. The various overseers are held responsible for variances due to improper labor handling, faulty production setups, and other unexplained deviations from the standard production or standard payrolls. They are also given full credit for favorable variances due to their own efforts in increasing production or reducing costs. An overseer may get better than standard production with a standard payroll, or standard production with less than the standard payroll. An interesting example of this type of variance occurred during the war years, with every pound of possible production scheduled and the frequent shortage of trained operators; the overseer very often was obliged to manage without a full, or standard, complement of help. In actual practice the standards were consistently in the black, due to the efforts of the overseer and his operators to maintain high production even if shorthanded.

If production difficulties develop beyond the control of the overseer, such as poor quality stock or faulty production from the preceding operation, he notes an exception on a report to the production and cost departments, stating that he expects to run off the standard and giving the reasons. This does not alter the standards but does explain the unfavorable variance.

The intelligent use of this weekly variance report is of great value in impressing upon supervisory personnel who are directly responsible for production the importance of cost control. By making available to these men all of the information on which the standards are based and the variances calculated, their cooperation and interest in cost control can be readily obtained and their antagonism toward cost departments and time study men can be avoided.

In closing these remarks on direct labor standards, I want to point out that in the period of over seven years that this system has been in operation the average variance from standard for all direct labor, involving a very substantial volume of payroll cost and production, has been slightly less than 3 per cent under.

Other Standard Cost Applications

Standard costs, in connection with budgets, are used for control of all indirect manufacturing expense, general and administrative expense, packing and shipping costs, and selling costs. We feel, however, that this subject should properly be discussed in a separate paper as it involves entirely different methods. Nevertheless, it should be noted here that the detailed explanation given for production and direct labor standards was done because a considerable part of factory burden is allocated departmentally by several different methods, all of which are very closely related to the direct labor and production standards. The integrity of the production and direct labor standards determines the soundness of the burden charges and, in a somewhat lesser degree, the allocation of the general, administrative, and other expenses.

In conclusion, we wish to repeat that this particular system is essentially a job or lot cost method, with standard cost methods imposed upon what was originally a very simple cost finding method that did little or nothing to control or analyze costs. We are very much interested in actual lot costs and Exhibit 4 included in the illustrations is the form used for accumulating a complete job cost. This is a very complete and interesting report, but it is not available to management until after the orders have been delivered, and except for its usefulness as historical data, is of little value in the control of costs.

STEAMSHIP ACCOUNTING

By Arthur B. Poole, Vice President and Treasurer, American President Lines, Ltd., San Francisco, Calif.

THE steamship industry has two main divisions which are convenient to have in mind. One is the unsubsidized portion of the industry. Unsubsidized steamship lines include primarily coastwise and intercoastal lines, but also some lines running to foreign ports.

Coastwise and intercoastal lines are protected by cabotage, that principle by which the carrying of passengers or freight between domestic ports by vessels flying foreign flags is prohibited. Other nations, but by no means all of them, apply the principle of cabotage in their affairs. The most prominent maritime nation which has not so far applied cabotage to its water-borne commerce is Great Britain.

The subsidized steamship industry is wholly composed of so-called "offshore" or "deep sea" lines, operating to foreign ports. An operating-differential subsidy is paid to these lines, after their routes have been determined essential in the foreign trade of the United States, to compensate them for the extra costs imposed on them by law. These costs include the use of American citizens in their crews, and "only articles, materials, and supplies of the growth, production, and manufacture of the United States . . . except when it is necessary to purchase supplies and equipment outside the United States to enable such vessel to continue and complete her voyage, and the operator shall perform repairs to subsidized vessels within the continental limits of the United States, except in an emergency."

These subsidized lines have certain accounting problems which do not devolve upon nonsubsidized lines. On the other hand, the accounting problems of nonsubsidized lines are completely shared by the subsidized lines. Accordingly, I shall discuss the special accounting problems and techniques of the subsidized lines, thereby automatically covering most of the accounting problems and techniques of nonsubsidized lines. Specifically, I shall present rather largely the accounting problems and techniques of my own com-

pany, American President Lines, because it is one of the very few steamship companies which before the war combined domestic business with subsidized foreign business. American President Lines carries intercoastal cargo and passengers as a substantial element in its Round-World and Atlantic-Coast-to-Straits-Settlements services, and may soon have an Atlantic-Coast-to-India service which will also include intercoastal traffic between the Atlantic Coast and California ports.

Operating-Differential Subsidy

During almost the entire history of the United States, subsidies in one form or another have existed for American-flag vessels. It is said that the first act of the Congress which met after the adoption of the Constitution in 1789, was to provide smaller port charges for American-flag vessels than for their foreign-flag competitors. Subsidies took various forms. At times it was a flat payment per annum for maintenance of certain transatlantic service. The last subsidy before the passage of the Merchant Marine Act of 1936 was a so-called "mail pay" which was measured by a combination of miles covered and vessel speed, and far exceeded reasonable compensation for the tonnage of mail hauled.

Under the prodding of President Roosevelt there was enacted by Congress in 1936 a Merchant Marine Act which established a national policy: "It is necessary for the national defense and development of its foreign and domestic commerce that the United States shall have a merchant marine (a) sufficient to carry its domestic water-borne commerce and a substantial portion of the water-borne export and import foreign commerce of the United States and to provide shipping service on all routes essential for maintaining the flow of such water-borne domestic and foreign water-borne commerce at all times, (b) capable of serving as a naval and military auxiliary in time of war or national emergency, (c) owned and operated under the United States flag by citizens of the United States in so far as may be practicable, and (d) composed of the best equipped, safest, and most suitable types of vessels, constructed in the United States, and manned with a trained and efficient citizen personnel. It is hereby declared to be the policy of the United States to foster the development and encourage the maintenance of such a merchant marine."

The Merchant Marine Act of 1936 recognized candidly for the first time that American standards of living and American wages were higher than in other maritime nations, and that if the Government was to require by law the use of American crews, American repair-yard artisans, and American manufacturers of equipment and supplies, there must be an "operating-differential" subsidy to offset the excess of the resultant costs over the comparative costs of foreign-flag competing vessels. Thus the subsidy is a subsidy to American workers, to get them to continue their efforts and experience in the American merchant marine, and is not in any real sense a subsidy to steamship companies. After receiving such subsidy payments, American steamship companies will still fail if their operations are not efficient and attractive to shippers.

Despite the apparent fairness of letting subsidized operators stand or fall on the basis of their success after equalizing their vessel-operating costs with those of foreign-flag vessels, the Merchant Marine Act says, in effect, that if a steampship company can earn more than 10 per cent per annum on its "capital necessarily employed" in the subsidized steamship operations, the subsidy is not really needed, and one-half of any such excess is recaptured by the United States as repayment of the subsidy. Consequently, most of the operating-differential subsidy paid by the United States from 1937 to the beginning of the war was recaptured, and the net cost to the Government of operating-differential subsidy was reduced to a very small amount.

Construction-Differential Subsidy

The Maritime Commission is also authorized to allow to American-flag operators on essential foreign trade routes a "construction-differential" subsidy, to offset the excess cost of vessels built in American yards with American workmen over the cost of similar vessels furnished by foreign shipyards to foreign-flag competitors. This likewise is a subsidy to American shipyard workers and equipment manufacturers rather than to the steamship companies. The Merchant Marine Act, for reasons of national policy, requires that subsidized operators use only American-built vessels on their routes.

Wartime Operations

During the war the Government took over all ocean-going vessels for its own use in the war effort, and steamship companies received modest charter hire for their vessels and closely regulated fees for their services. No subsidy was paid. The war period, however, is almost behind us and it is expected that in the next few months all steamship companies will recommence operations on a commercial basis. Hence, this paper is limited to steamship accounting as it will be carried on after the resumption of commercial operations. The subject divides itself naturally into four parts:

1. Accounts that go into an operating statement
2. Accounts appearing in a balance sheet
3. Steamship accounting methods and procedures
4. Steamship cost accounting.

Accounts Related to Operating Statements

The Voyage as the Accounting Unit

From the oldest known days of ocean traffic down to the present it has been customary to account for vessel operations on what we call a "venture" basis. For this purpose the round voyage has been the unit. A round voyage is a voyage from a given port back usually to the same port, and it ends with the discharge of the homebound cargo, the new voyage picking up when loading for the next voyage begins. For practical reasons, the end of a voyage is taken as midnight of the day on which discharge of cargo was finished. In early days, when ownership of vessels was calculated in 64th fractions, there might be changes in ownership from one voyage to another. In the present day of corporate ownership of vessels changes occur infrequently, but the voyage has continued to be both the convenient and the logical unit of accounting for profits. Thus an operating statement contains the results of the voyages which were *completed* during the accounting period, and no allowance is made for the income or expenses of voyages commenced before or during that period but terminated even as little as one day after the close of the period.

The basic unit of the income statement is the "voyage profit." This is the net profit of a voyage after vessel and voyage expenses, but before depreciation, mortgage interest, advertising, overhead,

and taxes. Vessel expense constitutes the direct cost of operating the vessel, including wages, fuel, lubricants, repairs, expendable equipment, stores, water, and provisions. Voyage expense comprises stevedoring, cargo checking, loss and damage claims, port charges, vessel insurance premium accruals, canal tolls, brokerage, and other direct expenses not actually a part of operating the vessel itself.

The Maritime Commission, through its General Order 22, has promulgated a complete system of numbered accounts to which subsidized lines must adhere in the rendering of quarterly and annual reports to the Commission. Steamship lines engaging in coastwise and intercoastal traffic in competition with railroad and truck lines are under the jurisdiction of the Interstate Commerce Commission, and must render accounts in accord with the ICC system of accounts for water carriers. Fortunately, the ICC has decided that any carrier obliged to render accounts to the Maritime Commission and the ICC both, such as American President Lines, may file with the ICC a copy of the report prepared under the Maritime Commission's General Order 22. The two bodies have consulted with each other to the end that the Maritime Commission reports will contain all information considered essential by the ICC.

Exhibits 1 and 2 include one sheet for direct accounting data, and one sheet for statistical and unit cost data. The pegboard form is especially convenient for voyages, because it makes readily possible a consistent comparison between any given voyage of a vessel, on the one hand, and on the other hand, other voyages of the same vessel, or similar voyages of sister ships, or any other voyages with which comparison may be useful.

It might be thought logical from what I have said about operating-differential subsidy, that subsidy earned would be deducted from the specific vessel expense accounts on which the subsidy was calculated. As a matter of fact, it has been found more convenient to calculate voyage profit on actual revenue and gross expense, and then to add to the voyage profit thus calculated the amount of the subsidy, giving rise to a new amount of voyage profit after subsidy. This method has been crystallized by its inclusion in the standard system of accounts established by General Order 22 of the Maritime Commission.

Charges Against Voyage Profits

Up to recent years the depreciation taken by steamship companies and recognized by the Treasury Department usually ranged between 2 per cent and 4 per cent, except for tankers and other vessels which carried corrosive cargo. The Merchant Marine Act of 1936 requires for its purposes that depreciation on vessels be calculated at 5 per cent of cost less a small arbitrary residual value. That residual value is 2½ per cent of original construction cost. Probably 4 per cent comes nearest the rate which experience in this and other nations has shown to be a safe and appropriate average. The Merchant Marine Act was designed to err a little on the conservative side so as to call for earlier replacement of vessels which may not have worn out but which may have become obsolescent by comparison with vessels under other flags.

General and administrative expense, the principal element of overhead, differs little in a steamship company from the same expense in other industries. The Maritime Commission, however, requires subsidized lines to treat all fees for agency services performed for other lines, and all commissions and brokerage earned, as a deduction from general and administrative expense instead of being carried as an additional form of revenue.

Advertising and interest expense are accounts which differ in no respect from similar accounts in other industries. Although a steamship company usually has mortgages against individual vessels, the interest cost is nevertheless not included in computing the voyage profits of those vessels. This is sound because for no reason related to earning power one vessel may be heavily mortgaged and another lightly mortgaged, while at some other date the borrowed capital may be nonexistent or held instead on an unsecured bank loan.

Steamship company taxes differ greatly from those of a manufacturing or trading company. Deep sea vessels, because of their location, are usually not subjected to a property tax at all. Furthermore, in order to encourage investment in an industry which was not attractive in former years, and which had been the victim of changing and uncertain government policies, Section 607(h) of the Merchant Marine Act of 1936 provided that "the earnings of any contractor receiving an operating-differential subsidy under authority of this Act, which are deposited in the contractor's (Capi-

EXHIBIT 1

AMERICAN PRESIDENT LINES LTD S. S. President Pierce
Route Transpacific

ANALYSIS OF EARNINGS AND EXPENSES VOY. NO. 68-5

Estimate	Revenues:		
119,000.	R1	Freight	$137,998.28
30,000.	R2	Passenger First Class	60,144.34
27,000.	R3	Passenger Special—Tourist Class	30,792.49
13,000.	R4	Passenger Third Class	18,223.89
685.	R5	Baggage	1,189.44
5,000.	R6	Mail	6,719.10
878.	R7	Refreshments (Net)	1,524.93
74.	R8	Slop Chest (Net)	128.23
100.	R9	Laundry	172.62
513.	R10	Miscellaneous	892.52
196,250.00		Total Revenue	257,785.84
	Operating Expenses:		
9,494.	E10	Wages Deck	10,150.45
2,057.	E11	Equipment "	350.53
1,819.	E12	Supplies "	1,966.40
669.	E13	Rope "	56.17
124.	E14	Sundries "	84.66
14,163.		Total Deck Department	12,608.21
10,808.	E20	Wages Engineers	10,729.14
177.	E21	Equipment "	197.14
37,298.	E22	Fuel "	40,344.33
279.	E23	Lubrication "	450.45
491.	E24	Water "	476.68
1,884.	E25	Supplies "	3,856.15
50.	E26	Sundries "	491.89
50,987.		Total Engineers Department	56,545.78
17,075.	E30	Wages Stewards	17,011.13
2,025.	E31	Wages Pursers	2,075.00
18,897.	E32	Provisions	22,820.82
1,494.	E33	Equipment Stewards	1,458.91
714.	E34	Crockery, Silverware and Glassware	487.52
1,679.	E35	Linen and Bedding	1,695.62
1,921.	E36	Supplies Stewards	2,358.70
803.	E37	Sundries Pursers and Stewards	1,170.78
44,608.		Total Pursers and Stewards Departments	49,078.48

	E40	Repairs, Hull and Deck Dept.	2,955.86
	E41	" Boilers and Condensors	1,422.72
	E42	" Main Engines	1,162.16
	E43	" Deck and Auxiliary Machinery	2,191.10
	E44	" Radio and Electric	417.02
	E45	" Stewards Dept.	4,914.44
	E46	" Drydocking—Extraordinary Repairs (Accrual)	
20,000.		Total Repairs	13,063.30
6,035.	E50	Insurance, Marine	6,354.92
1,768.	E51	Insurance, Protection and Indemnity	1,589.90
50.	E52	Personal Injury	2.89
330.	E53	Stationery and Printing	505.07
8,183.		Total Other Vessel Expense	8,452.78
137,941.		Total Vessel Expense	139,748.55
23,595.	E60	Stevedoring	33,082.15
484.	E61	Restowing and Misstowed Cargo	579.87
3,267.	E62	Clerk Hire	4,111.35
2,904.	E63	Wharfage, Lighterage and Handling	2,681.07
2,420.	E64	Cargo Sundries	4,339.32
2,000.	E65	Loss and Damage Claims	2,133.47
34,670.		Total Cargo Expense	46,927.23
2,736.	E70	Pilotage, Towage and Launch Hire	1,730.43
3,815.	E71	Dockage	3,731.89
1,869.	E72	Tonnage Dues and Canal Tolls	1,263.91
2,698.	E73	Quarantine, Customs and Consular Fees	3,329.00
11,118.		Total Port Expense	10,055.23
45,788.		Total Cargo and Port Expense	56,982.46
126.	E80	Brokerage, Freight	247.42
1,800.	E81	Brokerage, Passenger	2,249.51
	E82	Agency Fees	
580.	E83	Commissions, Freight and Mail	537.03
42.	E84	" Passenger	50.72
	E85	" Disbursing	
2,548.00		Total Commissions Expense	3,084.68
	E90	Advertising	1.82
1,000.	E91	General Expense Sundries	1,205.31
1,000.		Total General Expense	1,207.13
49,336.		Total Voyage Expense	61,274.27
187,277.00		Total Operating Expense	201.022.82
8,973.		Voyage Profit (Loss)	56,763.02

P VOY. ENDED 10/1/39 SUBSIDY ACCRUED $42,923.64

EXHIBIT 2

AMERICAN PRESIDENT LINES LTD. S. S. President Pierce
Route Transpacific

Estimate	VOYAGE STATISTICS VOY. NO. 68-5API	
	Service (F—Freighter, F and P—Freight and Passenger)	F & P
	Date Voyage Began	8/7/39
	Date Voyage Ended	10/1/39
	No. of Nautical Miles Traveled	16,534
42	Running Time—Days	41
14	Port Time—Days	15
56	Total Number of Days	56
	Cost Per Day, Vessel Expense	
2,622.57	Cost Per Day, Vessel Expense—Running	2,688.88
1,984.48	Cost Per Day, Vessel Expense—Port	1,980.58
	No. of First Class Passengers	271
	No. of Special Class Passengers	
	No. of Tourist Passengers	269
	No. of Third Class Passengers	317
	No. of Steerage Class Passengers (Asiatics)	
	No. of Non-Revenue Passengers	
	Total Passengers	857
	"Cabin Menu" Meals Served Passengers	24,396
	"Cabin Menu" Meals Served Officers and Crew	32,424
	"Cabin Menu" Meals Served Free	362
	Total "Cabin Menu" Meals Served	57,182
	"Crew Menu" Meals Served Crew	6,384
	"Crew Menu" Meals Served Third Class Passengers	1,035
	Total "Crew Menu" Meals Served	7,419
	"Asiatic Food" Meals Served	10,862
	Total Meals Served Passengers and Crew	75,463
	Cost Per Meal—Provisions	
	"Cabin Menu" Meals	35
	"Crew Menu" Meals	25
	"Asiatic Food" Meals	
	Average Cost Per Meal—Provisions: All Meals	30

	Cost Per Meal—Steward's Wages.....	23
42	No. in Deck Crew.....	42
48	No. in Engine Crew	51
126	No. in Stewards Crew.....	128
9	No. in Pursers Crew	9
225	Total Crew	230
	Fuel Purchases and Consumption.....	
	On Hand Beginning of Voyage—Bbls.....	4,371
	Bbls. Purchased at Boston (Price Per Bbl. $.....)	
	Bbls. Purchased at New York.....	
	" " " Cristobal	
	" " " Balboa	
	" " " Los Angeles ..... .721	21,555
	" " " San Francisco ..... .812	5,010
	" " " Honolulu 1.13	9,549
	" " " Yokohama	
	" " " Hong Kong 1.76	5,001
	" " " Manila	
	" " " Singapore	
	" " " Bombay	
	" " " Port Said	
	Total Barrels On Hand Beg. of Voy. and Purchased	45,486
	On Hand End of Voyage—Barrels.....	3,248
39,250	Consumption Round Voyage—Barrels.....	42,238
36,490	Barrels Consumed—Running.....	39,027
2,760	" " —Port	3,211
869	Consumption: Barrels Per Day—Running.....	952
197	" " " " —Port	214
	" " " " —Steaming Mile	2.36
	" " " " —Engine Mile..	2.05
	Slip %	
95	Average Cost Per Barrel.....	96
12,100	No. of Revenue Cargo Tons.....	16,263
	No. of Non-Revenue Cargo Tons.....	
9.83	Average Rate Per Revenue Ton.....	8.49
2.87	Cargo Expense—Cost Per Ton.....	2.89
95%	% Total Operating Expense of Total Revenue....	78%
1,667.	Crew Overtime—Deck Dept.	3,396.53
1,121.	" " —Engine Dept.	1,781.86
903.	" " —Stewards	2,122.60
3,691.	Total Overtime	7,300.99

P VOY. ENDED 10/1/39 SUBSIDY ACCRUED $42,923.64

tal and Special) Reserve Funds . . ., except earnings withdrawn from the Special Reserve Funds and paid into the contractor's general funds or distributed as dividends or bonuses . . ., shall be exempt from all Federal taxes." Accordingly, you may see tax charges in steamship company statements at times lower than you would otherwise expect.

Offshore steamship companies do have considerable difficulty with income taxes in foreign countries. It has been generally recognized by those engaged in international trade that taxation of international carriers should be confined to the nations to which the respective carriers belong. Some progress in this direction has been made by way of treaties, and our Department of State has in hand the matter of negotiating similar treaties affecting other nations and colonies. Of course American steamship companies, like all other American companies doing business in foreign countries, may deduct from their United States income tax an amount actually paid in income tax to a foreign country, to the extent that such tax does not exceed the amount which would otherwise have been payable on the same income to the United States.

Certain Debits and Credits to Surplus

After arriving at net income, there are still two items which will appear on a subsidized steamship company's operating statement which are peculiar to such a statement. The first is composed of debits and credits to surplus on account of transactions of former years. It is considered good practice for most non public utility companies to absorb in the current year's income statement small adjustments and newly discovered or determined items which pertain to prior years, leaving only large or otherwise significant items to be set forth separately as surplus entries. This is not true under the Maritime Commission's General Order 22. The subsidy accrued and the subsidy recapture accrued are required to be corrected and adjusted almost indefinitely for all items above very low maxima, and therefore you will find surplus adjustments prevalent in subsidized steamship company reports.

The other item likely to be found in the surplus account of a subsidized steamship company is an amount carried to subsidy recapture if the earnings from subsidized operations were more than 10 per cent on "capital necessarily employed" (as defined and deter-

mined by the Maritime Commisison), and an amount carried into surplus from the subsidy recapture liability if such earnings were less than 10 per cent *and* if there is previous provision for subsidy recapture on which to draw. Subsidy recapture is computed cumulatively, and settlement occurs at the end of every ten years during the life of the operating-differential subsidy contract.

Accounts Related to Balance Sheet

Asset Accounts

Accounts receivable from interline carriers may be of moderate size, but in general transportation is not provided on credit terms and the accounts receivable of a steamship company are likely to consist of interline accounts, subsidy earned, government bills of lading unaccomplished, and items other than amounts due from commercial customers, the total being substantially less than that of a typical manufacturing or distributing corporation.

A subsidized operator will have a Capital Reserve Fund on his balance sheet. Into that fund go all earned depreciation on the subsidized vessels and the proceeds of all subsidized vessels either sold or lost. From it replacement vessels are purchased or reconstruction of existing vessels is paid. Such payments include the meeting of mortgage maturities on vessels. Subsidized operators understand that any gain upon disposition of vessels is exempt from tax under Section 607(h) of the Merchant Marine Act, 1936, quoted above, but the Treasury Department has not yet conceded this point. For vessels involuntarily sold or lost, a capital reserve fund takes the place of a replacement fund under Section 112(f) of the current Internal Revenue Code, except that a replacement fund offers, in effect, tax deferment, while a capital reserve fund is believed to offer tax exemption.

Another item peculiar to the balance sheet of a subsidized operator is the Special Reserve Fund. Into this fund go all earnings in excess of 10 per cent on "capital necessarily employed" in the subsidized operations, as defined and determined by the Maritime Commission. Half of such earnings, calculated cumulatively and not in excess of the entire operating-differential subsidy received during the period, is considered held for settlement with the Maritime Commission, but all of such earnings are available, if required, to replenish operating funds exhausted by current

voyage losses. Upon recapture settlement any remainder in the special reserve fund, except 5 per cent of "capital necessarily employed" withheld as a nest egg for the next subsidy period, may be withdrawn subject to the federal income tax rates in effect at that time.

Either a nonsubsidized or a subsidized operator may have a Construction Reserve Fund under Section 511 of the Merchant Marine Act, 1936, into which may be paid the proceeds of non subsidized vessels. Such a fund resembles more closely the replacement fund of the current Internal Revenue Code, in that it offers only tax deferment and not tax exemption. The deferred tax is ultimately paid as the result of depreciation deductions limited to those calculated on the tax base of the vessel sold or lost (exclusive of any capital gain deposited in the fund). The advantages which a construction reserve fund offers over a replacement fund are (a) the fact that it is open to the proceeds of vessels lost or sold voluntarily as well as involuntarily, and (b) the advantages, if any, of administration jointly by the Maritime Commission and the Treasury Department instead of by the Treasury Department alone.

The capital asset accounts of a steamship company usually reflect chiefly owned vessels. As mentioned earlier, subsidized operators now use a very conservative useful life (20 years) in calculating depreciation. Thus, barring unexpectedly large obsolescence, the fleet is likely to have an unamortized value on the balance sheet somewhat less than might otherwise remain to be spread over its remaining life.

Another asset account which differs no whit from the related account in other balance sheets, but is likely to be disproportionately large in comparison, is unearned insurance premiums. The values of individual steamships are large, the risks of loss and of general liability are substantial, and the premiums consequently are a major element both in the balance sheet and in the calculation of voyage profit. Steamship companies usually find it wise to cover the vessel risks with policies extensive both in their breadth of coverage and in the amounts of protection.

Liabilities

On the liability side of a steamship company balance sheet it is normal to have large balances for tickets sold for voyages both

not yet commenced and commenced but not terminated. Also, it is normal on many ocean-trade routes for most freight to be prepaid. Accordingly, there may be large amounts of freight moneys received on voyages commenced but not terminated. Since the wage and repair obligations are not determined until the end of the voyage, and the stevedoring and certain other costs accrue only as the voyage proceeds, there is to be expected at any one time a substantial balance of deferred revenue over the amount of vessel and voyage expenses incurred on unterminated voyages. In fact, one could go so far as to say that in the steamship business, instead of financing your customers, your customers may easily supply all your net working capital.

A steamship company customarily stores its vessels directly from wholesale dealers, and maintains only small inventories of stores and spare parts. Hence usual credit terms are short, payments are prompt, and accounts payable are comparatively small in total.

No other balance sheet account seems to require comment except that a subsidized operator will likely have a liability to the Maritime Commission for operating-differential subsidy recapture, as previously described herein. He may also have a small amount due the Maritime Commission as refund of construction-differential subsidy, measured by incidental revenue which he may have earned between domestic ports located on his trade route to a foreign country or countries. Since domestic carryings are protected by cabotage from foreign-flag competition, any construction-differential subsidy received to equalize construction costs with those of foreign shipyards must be refunded to the Maritime Commission to the extent that such subsidized vessels may in fact carry domestic freight or passengers.

Steamship Accounting Methods and Procedures

Accounts Receivable and Revenue Collections

From the preceding description of accounts certain procedures typical of steamship accounting may readily be inferred. Thus, no customers' accounts receivable ledgers are kept. Instead, bills of lading and ticket stock form the basis of collection of revenue, and the freight cashier and passenger ticket issuers, respectively, are held primarily responsible for revenue collections.

Freight revenue arises from revenue tons determined by the weighers and measurers of cargo at the dock, and from rates specified by special rate clerks who know the large and complicated tariffs. The tonnage and rates are entered on the bills of lading, and the vessel's manifest summarizes all the bills of lading issued for the given voyage. The freight cashier is required within a short period to account for all moneys indicated on the manifest as collectible from shippers or consignees at his port on the voyage in question.

Passenger revenue arises almost wholly from space assigned in the shoreside passenger office to a person who has purchased a ticket before he embarks. Collection of passenger revenue is assured by holding the passenger office responsible for ticket stock delivered to it. The passenger manifest, prepared by the vessel's purser and showing space occupied and ticket numbers, serves as a check on the monthly reports of tickets issued by the several passenger offices.

Accounts Payable

Another inference from what has been said earlier in this paper is that frequently steamship companies maintain no ledgers for trade accounts payable, but rather make charges to the respective accounts direct from a copy of the voucher check used in paying invoices. A vendor's index, containing notation of invoice amounts, is useful for record purposes, including that of "reciprocity" when that is a factor in securing traffic.

Traffic Analysis

A successful steamship company must watch with care its average freight rates, and have a keen eye to notice dwindling commodity movements and to build up movements of new commodities and movements of old commodities to new ports. Thus it is important that the bills of lading be analyzed in a number of ways. The commodity itself, the shipper, the consignee, the port of loading, the port of discharge, the freight rate, the total freight, the soliciting freight office, and the weight and measurement tonnage are all factors of interest. Fortunately the average bill of lading covers enough freight fully to justify the use of a punched

card, and punched cards are extensively used for freight traffic analysis.

Some use in the industry is also made of punched cards for similar analysis of passenger tickets sold, but this use of punched cards is less extensive than for bills of lading.

Controlling Accounts in Voyage Accounting

The most elaborate system of controlling accounts found in steamship companies is that having to do with voyage profit. The sequence of controlling accounts is typically as follows: Vessel and voyage expense in total; then by trade routes; then by individual voyage on a trade route; then by individual expense on the voyage.

Passenger revenue and freight revenue are controlled by similar controlling accounts.

Accounts in Foreign Currencies

Naturally, steamship companies have to deal very largely in foreign exchange. Steamship companies have been able so far, however, to require payment of freight and passenger revenue in U.S. dollars or other stable currency, or their equivalent. The "other stable currency" or the "equivalent" is, in the case of experienced American steamship companies, almost instantly converted into U.S. dollars, thus removing both the risk of foreign exchange fluctuations and the chore of maintaining and converting accounts kept in foreign currencies.

Home Office Concentration of Accounting Work

Steamship companies get financial data from a very large number of domestic and foreign branches, agents, vessel pursers, and connecting lines. It is uniformly the practice to require straight factual reports from all these sources, and to perform nearly all bookkeeping and auditing duties at the home office. Needless to say, it is quite a task to fit all of these reports together to provide the complete and accurate story of the voyages terminated during the month, each voyage account being composed of transactions in perhaps 15 to 30 calls at 6 to 25 different ports, in nearly as many different countries.

Crew Payrolls

Because of the elaborate nature of crew payrolls steamship companies must maintain capable and alert crew payroll audit sections. Added to the accrual of basic wages for the odd periods of voyage duration there are the complications of overtime, area bonuses, "penalty" wage additions, allotments, money advances, "slop chest" charges, fines by the master, and earned vacation credits, not to mention the usual tax deductions and withholdings. Allowance for the value of meals and lodging furnished must be made for certain deductions but not for others. Added to all this is the necessity of almost immediate payoff upon arrival at the last port of the voyage, although the purser may have been unable to complete his payroll ready for submission to the auditor, and quick shoreside assistance to him is required.

Invoices

Frequently the operating manager of a steamship company will want, when he gets his voyage report from the accounting office, personally to review all the costs of the voyage. For that reason it is necessary to maintain invoice files, so that all invoices pertaining to a given voyage may readily be available in a single place. Subsequently the audit of the voyage by the Maritime Commission will require the submission of the invoices in the same way.

Special Operations Schedules

The previously mentioned obligation to relate a great mass of surplus adjustments back to the years and voyages to which they technically belong requires the maintenance of special schedules, which in effect hold operating accounts open for several years.

Steamship Cost Accounting

Three items on this subject appear to merit attention in this paper: Unit revenues and costs as calculated from voyage statements, allocation of costs as between freight and passenger traffic, and allocation of overhead to voyages.

Voyage Costs and Statistics

The second sheet of the voyage statement tells exactly what unit costs one large steamship company finds it worth while uni-

formly to compute: cost of a meal of each class, average cost of fuel per barrel, fuel consumption per day in port and while steaming, fuel consumption per steaming mile and per engine mile, average revenue per freight ton, cargo expense (chiefly stevedoring) per ton, and voyage cost per dollar of revenue.

All of these unit costs need to be mentally or actually adjusted to meet the applicable conditions. For example, if fuel cost was high, was the higher cost occasioned by purchasing fuel oil in out-of-the-way ports in order meanwhile to gain more deadweight capacity for high-rate cargo? If the fuel consumption was light, is that fact traceable to the low deadweight on that voyage? If the revenue per freight ton was low, was a considerable portion of the cargo of a liquid nature, requiring almost no loading or discharge expense? Conversely, if the cargo costs were high, was the average freight rate sufficiently high to more than cover them?

These examples suffice to illustrate my point, which is that nearly all unit costs are good or bad only in relation to the other factors with which they are interrelated. A cost accountant can have a field day working with the unit costs of almost any steamship voyage.

It might be helpful at this point to insert a definition of revenue tonnage. Revenue tonnage is the tonnage on which freight is computed. A weight ton is usually 2,240 pounds in foreign trade, frequently 2,000 pounds in the domestic trade. A metric ton is almost the same as a long ton of 2,240 pounds. A cubic ton is usually 40 cubic feet, although there are exceptions, rubber from Singapore, for example, being measured at 50 cubic feet to the ton. It is usual for the freight to be computed, at the carrier's option, on weight or measurement, whichever will give the larger revenue. Thus, it is possible for the revenue tonnage on a given voyage, ignoring even an allowance for broken stowage, to exceed both the cubic tonnage and the cargo deadweight tonnage. The cargo bookers naturally try to secure balanced cargoes, so that the ship will be "full and down," that is, with both her cubic and deadweight capacity fully used.

Joint Passenger and Freight Costs

One of the most interesting things to me in my steamship accounting experience is that I have never yet run across a serious,

fully developed set of cost accounts setting forth the relative net profit of the passenger and freight traffic carried on a given vessel or group of vessels. Obviously such cost accounts, if available, would be useful in developing the rate structure, and in the design of new vessels, and might lead on occasion to major alterations in vessels in service.

Of course the revenue from the sale of passenger tickets and transport of excess baggage is accurately known; and so is the revenue from carryings of cargo and mail. It is on the cost side that analysis bogs down. In the first place, the entire design of the vessel is affected by passenger facilities. The cubic space occupied by passengers and the extra crew members who care for them is taken partly from what would otherwise be cargo space and partly by enlarging the superstructure. The cargo deadweight capacity is affected by a change in the safe load line, by the weight of the superstructure, by the change of the center of gravity, and by the weight of additional compartmentation bulkheads. The higher speed required for passenger service involves heavier and larger propulsion equipment, heavier loads of fuel oil, and finer hull lines affecting the cubic cargo capacity of the hull. The factors affecting cargo cubic capacity may be disproportionate to the factors affecting cargo deadweight capacity. With all these factors, who would undertake to estimate in terms of vessel depreciation and insurance, and of cargo revenue lost, what the cost of carrying passengers had been?

Again, a passenger vessel must adhere to a regular schedule of sailing hours and piers. A freight vessel may delay a sailing, shift to another pier in the port, or even make calls at unscheduled ports, in order to get desirable cargo which a passenger vessel must forego. On the other hand, for example, transpacific passenger vessels must make calls at Honolulu, for the pleasure of passengers, but might profitably by-pass Honolulu by as far as 2,000 miles if there were only freight aboard.

Again, passengers load and unload themselves, requiring only a limited stay of the vessel at a pier or dock. Cargo must be received, stored, and loaded, and then unloaded, re-stored, and delivered. The costs of terminal operation are of diverse natures. Who could with reasonable accuracy allocate the costs of terminal operations to passenger traffic and freight traffic? What kind of

pier would a steamship company occupy if its operations were entirely passenger or entirely freight, and how does one separate the costs of terminal staff whose services are joint as to passenger and freight traffic?

I leave the discussion of calculating relative passenger and freight net income at this point. Enough has been said to indicate many of the difficulties. I do not say that it is impossible. I hope that any one who may enter the steamship industry will bring a fresh approach to the problem. Perhaps he will yet show us how to arrive at a reasonable approximation of the separate results of carrying passengers and cargo on the same vessel. At the same time he might keep in mind that some of the passenger lines look upon their passenger traffic as an important factor in establishing their prestige and public acceptance, and deem it to have substantial effect on the volume of cargo obtained.

Allocation of Overhead

Frequently it is desirable to attempt an approximation of net profit from a voyage, or at least the profit after allocation of overhead. There is no standard formula for allocating overhead to voyages. The allocation might be made by gross tonnage for passenger vessels, or by deadweight tons for freight vessels. A gross ton is 100 cubic feet of a vessel's enclosed space. A deadweight ton is 2,240 pounds carrying capacity available for cargo, fuel, lubricants, water, or stores. Sometimes overhead is taken as a charge against voyage profits, on the theory that management does, or should, expend efforts in proportion to the voyage profit obtainable. The nature of the accounting problem, not to mention the result desired to be obtained, may influence the method decided upon for overhead allocation.

Conclusion

It is not practicable, in closing, to summarize in a few sentences all that goes before. It might be useful, however, to set down just as a reminder, a few of the high lights of steamship accounting as it differs from accounting likely to be found in another industry.

1. The accounting unit of operations is the terminated voyage. Cost accounting for the terminated voyage is the

accountant's paradise or seething hell, depending upon how deeply he likes to get into the most tangled mass of interrelated cost factors which one can imagine.

2. The problem of assembling promptly the voyage revenues, expenses, and physical data related, for example, to a Round-World voyage of about 25 port calls, is enough to keep an accountant on his mettle. The vessel pursers, branch offices, agents at ports "on line" and on the lines of connecting carriers, and the connecting carriers themselves, all together constitute an extraordinarily large number of sources of the financial data relating to the terminated voyage. These data must be assembled rapidly if the voyage results are to be known with reasonable promptness.
3. Operating-differential subsidy, construction-differential subsidy, recapture of the former and refund of the latter, capital reserve funds, special reserve funds, and construction, reserve funds, all are peculiar to the steamship industry and all require an understanding of the Merchant Marine Act of 1936.
4. Subsidized steamship companies are largely consistent with each other in the terminology, form, and fleet valuations in their financial statements, but nonsubsidized companies, not subject to Maritime Commission General Order 22, are much less consistent with each other.
5. Cabotage is a form of embargo on domestic transportation services which might otherwise be "imported" from vessels of foreign flags.
6. The federal taxation of subsidized steamship companies varies greatly from ordinary federal taxation on corporations.
7. Punched cards are well adapted to the analysis of freight and passenger revenues.
8. The federal statutes, collective bargaining, and established steamship practices combine to make crew payrolls among the most elaborate which are prepared anywhere.

The steamship industry is a service industry, directly dependent for its existence on the volume of trade and travel moving

between ports. Because of American high wages, the domestic steamship industry must also depend in part on cabotage for its existence, and the deepsea trades must depend in part on operating-differential subsidy.

Domestically, the steamship industry has trucks and railroads as its principal competitors. On "offshore" trade routes the competitors are airplanes and vessels flying foreign flags.

The size, strength, and soundness of the steamship industry of the United States will, of course, be in part a measure of the wisdom of its management, including those charged with the keeping and interpretation of its accounts. More basically, however, it will be a measure of the long-run need felt by the nation as a whole for the support of domestic and foreign trade by an adequate merchant marine, and for the support by that same merchant marine of military power capable of being exerted beyond our coasts.

OFFICE EQUIPMENT PRODUCTION IS UP

A recent survey of the production status of office equipment manufacturers, undertaken by the Journal of Commerce, indicates a current output approximating that of 1941 but making use of only 75 per cent of the industry's capacity, increased during wartime. It is noted, however, that between one and two years' production will be required to clear up the backlog of orders.

The survey, as reported, covered the production situations at the Underwood Corp., Royal Typewriter Co., National Cash Register Co., Burroughs Adding Machine Co., Remington Rand, Inc., Victor Adding Machine Co., Marchant Calculating Machine Co., and the Todd Co. Maintenance or acceleration of the present pace of production is disclosed as dependent on a steady flow of the principal materials, such as copper, steel, and plastics, and on the absence of labor disturbances.

OUR OPEN FORUM

When the Gremlins Hex the Figures

Editor, N. A. C. A. Bulletin:

Most of us accountants regard the figures prepared in accounting departments as honest and dependable, while we look upon the figures of statisticians as unreliable and warped by the subconscious prejudices of their compilers. However, we should beware of the gremlins who sometimes sneak into our bailiwick and do strange things with our own figures.

For example, the executives of a certain company were considering a proposal which might cut the cost to manufacture of its product by one-half per cent. A gremlin whispered, "Why bother to discuss a mere half per cent?" But the cost to manufacture was 75 per cent of the sales price and the net profit was only 3 per cent of sales, so a decrease of 0.5 per cent in manufacturing cost meant a 12.5 per cent increase in net profit, a worthwhile gain in any year.

During the war a certain company was having a rejection rate of 54 pieces per 100 of a high precision part for an aircraft engine. The men performing the final operation were skilled mechanics but no longer young. Those who wore glasses had gone to oculists who had automatically given them prescriptions for reading glasses. Actually their job required optimum vision at double the normal reading distance. On the insistence of a top executive all of the men had their eyes reexamined and glasses prescribed for the conditions of the job, rather than for reading the newspapers at home. In a week the rejects dropped from 54 per 100 to 29 per 100. The foreman reported a gain of 25 per cent (54 — 29 = 25). Actually the parts passing inspection had increased from 46 to 71, or a gain of 55 per cent. The new glasses for the men paid for themselves almost overnight.

The slyest gremlin of them all is the one who specializes in averages. A number of years ago a manufacturer of machine tools had a full-page ad in a trade paper, which purported to prove by the use of averages that a certain machine would save 85 per cent of its cost in the first year. If the averages were disentangled it became doubtful if the machine would have saved any money at all for its purchaser. Averages are tricky for several reasons. When computing the average one sometimes makes assumptions of which one is not conscious; for example, that because a new machine can turn out a certain number of pieces per day, an equal number can be sold. When shrinkage in demand lessens production on machinery already owned, it is not fair to include the cost of what we don't make with the cost of what we do. Hence, normal burden rates. But when we are considering the purchase of a new machine we must figure to recover its entire cost from its salable product, not from a theoretical maximum capacity output.

Another danger in the use of averages is that in interpreting the results one may forget an assumption consciously made when the average was computed. Or the person who computes an average may pass it on to another person who uses it in ways that the original computer did not intend. The passing along of an average gives the gremlins a great opportunity.

When comparing alternatives the use of averages, with their attendant gremlins, can be by-passed by setting up in parallel columns the total dollars per year, or for a series of years, of actual income and out-of-pocket expense which differ for these alternatives. It is obviously unnecessary to tabulate items which are identical for all columns. If, for example, sales will be the same whether we use our present machinery, or new machine A, or new machine B, we need tabulate only expense. When averages are used the machinery salesman, like the devil quoting scripture, will often introduce hypothetical burden rates and similar irrelevancies. When we put down actual annual figures, it is obvious that the salary of the superintendent, the rent of the factory, and many other items of overhead will not be affected by a single cent if we purchase machine A instead of machine B.

Lest we leave even a puny gremlin lurking in a corner, it may not be amiss to point out that in comparing machinery already owned with machinery which might be bought the amount of depreciation already charged has nothing to do with the case. For purposes of comparison, the cost of retaining an old machine is simply its second-hand cash sales value today, not the undepreciated portion of its original costs. And however we may allocate costs and profits, any purchase of a machine leaves the bank account worse off until the entire cost of the machine has been recovered through the sale of its product.

The last gremlin to beware of is the one who points to the final figure which has successfully run the gauntlet of all the other gremlins and shouts, "That's it."

Figures are at best a basis for judgment. They are never a substitute for judgment.

CHARLES H. PORTER,
Boston Chapter.

CENTS-PER-HOUR WAGE INCREASES

Editor, N. A. C. A. Bulletin:

I was interested in Louis C. Chase's Open Forum letter on "Wage Increases" in the June 1 *Bulletin*. Mr. Chase seems to think that a cents-per-hour instead of a percentage increase is something that has developed during the postwar period. Unfortunately, the unions, with the aid of the New Deal, have been rooting that idea into our economy since before the war. For example, it started in the steel industry with a ten cents per hour general increase in 1941. This was followed in 1942 by a 5½ cents

per hour increase which the NWLB ordered the steel industry to pay. Thus, with the recent 18½ cents we now have a total adjustment for each payroll calculation of 34 cents per hour.

This method of increasing wages is, of course, part of a CIO, New Deal philosophy of narrowing the spread of the income levels of the country and of minimizing individual initiative, industry, and ability. Thus, we are forced into uinon contracts which leave out all consideration of individual merit and which make seniority the only consideration in transfers, promotions, lay-offs, and even changes within established rate ranges for salaried employees. It is, of course, also this same philosophy which led Roosevelt into his ill-fated attempt to limit annual individual earnings to $25,000.

I do not consider that Mr. Chase is entirely correct when he says that "no one has yet made vigorous objection to this change of formula". During the recent strike epidemic the General Electric Company and other large companies attempted to settle on a percentage basis and took this case to the public in large advertisements in the newspapers, but in the end I believe all were forced to come around to a cents-per-hour settlement.

Mr. Chase refers to the problems and complications of payroll computations where piece rates and bonus incentive systems are involved. I do not want to minimize the present-day payroll preparation problems, because our payroll department has doubled since the advent of a national union in our shops, but I think Mr. Chase is making the problem unduly complicated if he is trying, as he infers, to incorporate a cents-per-hour increase into his incentive systems. In our case, we merely adjusted our day work rates by the increases per hour. Where incentive earnings are involved, we added the rate-per-hour increase to the hours worked on incentive rather than change the incentive rate. This does not seem to present any special problem in payroll calculation other than increased clerical work.

H. D. Rathbun,
New York Chapter.

COST CURRENTS

Records of Traveling and Entertainment Expense for Tax Purposes—Since the U. S. Circuit Court of Appeals handed down its opinion in the Cohan case in 1930, it has been the general rule that, even in the absence of supporting records, deductions for traveling and entertainment expenses cannot be entirely disallowed where it is plain that these expenses are present in the taxpayer's business. The possibility that the Cohan decision may no longer hold its force as precedent is raised by two recent decisions by the court in the Rohmer and Molnar cases in January and June respectively.

In these two cases, the court held that amounts received by non-resident aliens from sales of book and motion picture rights to American corporations constituted income from domestic sources in full, despite the known conduct of regular foreign publishing and exhibiting operations by the purchasers. Although neither of these later cases concerned traveling and entertainment expenses, Judge Learned Hand specifically gave as a reason for concurring in the Molnar case that the Rohmer case had already overruled his opinion in the Cohan case. He thus indicated a close logical relationship among the cases, making it inconsistent to base a decision, in the absence of records, on the normal conduct of business in the Cohan case and not in the others.

Amortization of Promotional Expenses—A reminder that carrying advertising and other promotional expenses forward, instead of charging them to expense may make it impossible to deduct them for tax purposes at any time, is afforded by the Tax Court's decision in June, 1946, in the Ex-Pando Corporation case. It was held that such expenditures, if carried forward, are good will and hence not subject to depreciation or amortization for tax purposes.

The taxpayer had incurred heavy promotional expenditures after 1937, incident to control by new interests. A portion had been charged to expense as incurred and the remainder had been amortized at the rate of 20 per cent per annum, starting with 1941. The Court disallowed the amortization.

Preservation of Records for OPA—Under an order dated June 30, 1946, the last day of the life of the OPA under the Emergency Price Control Act of 1942, records required to be made or kept on or before that date are directed to be preserved until July 1, 1947. Invoices, sales lists, sales slips, orders, vouchers, receipts, bills of lading, and memoranda are specified, as well as books and contracts. A note appended to the order states that its "record-keeping and reporting requirements have been approved by the Bureau of the Budget".

IN THE NEWS

Waterbury Chapter Receives Charter

WATERBURY (Conn.) Chapter, latest group to be admitted to the N. A. C. A. family, held its inaugural meeting on June 11 at Waterbury with Clinton W. Bennett, new National Vice President, Wyman P. Fiske, National Secretary, Herman A. Papenfoth and W. Leonard Donovan, National Directors, John S. Monogan, Mayor of Waterbury, and Frank J. Green, Secretary of the Waterbury Chamber of Commerce, present as guests. The new Chapter, 85th N. A. C. A. Chapter, is comprised of former HARTFORD Chapter members who hail from Watertown, Naugatuck, Southington, Torrington, and nearby communities. WATERBURY Chapter has 84 members.

Chosen as officers of the new Chapter at the initial meeting were Arnold C. Wolf of the Scovill Mfg. Co., Waterbury, President; John J. Wrinn of the United States Rubber Co., Naugatuck, and George D. Roberts, Jr., of Turner & Seymour Mfg. Co., Torrington, Vice Presidents; Walter O. Carlson, Bristol Brass Corp., Bristol, Treasurer; and Thomas E. McLaughlin, Waterbury Farrel Foundry & Machinery Co., Waterbury, Secretary.

Principal speaker at the first meeting was Clinton W. Bennett, National Vice President and Partner of Cooley & Marvin, Boston, whose subject was "Cost Accounting in the Postwar Competitive Market."

Representatives of BRIDGEPORT, HARTFORD, NEW HAVEN, and SPRINGFIELD Chapters attended the meeting.

Employment Activity Doubles in 1945-46

A preliminary survey of employment figures for the recent chapter year reveals that N. A. C. A.'s employment service handled twice as many applicants, filled twice as many positions for employers, and succeeded in placing twice as many men in jobs as in the preceding chapter year of 1944-45. The increased activity of the employment service rendered by N. A. C. A. chapters and National Headquarters reflects the changing conditions occasioned by the closing down of many wartime industries and the return of veterans to civilian life.

A total of 631 applicants for positions were placed during the chapter year 1945-46, as contrasted with 276 in 1944-45. A total of 518 requests from employers seeking qualified men were filled, a figure exactly twice that of 259 recorded for 1944-45. Perhaps the most significant statistic revealing the increased activity of the past year comes under the heading "applications received". During the past year 1955 job seekers—almost double the number of 1021 for 1944-45—used the facilities of N. A. C. A. in their efforts to obtain positions.

Results of Interchapter Competitions Announced

The results of thirty interchapter competitions conducted during the past chapter year were announced recently by National Headquarters. Winners in the interchapter competitions, chosen on the basis of Stevenson Trophy points accumulated during the year, are awarded two copies of the "Cost Accountants' Handbook." One copy of the same publication is given to each losing chapter. The Board of Directors of each chapter decides upon what basis and to which persons within the chapter the books are allocated.

Following are the results of the interchapter competitions for the chapter year 1945-46, together with the scores of both winning and losing chapters:

Birmingham 5549	Fort Wayne 4421	Philadelphia 4758
Atlanta 4710	Indianapolis 4384	Pittsburgh 3889
Bridgeport 4390	Grand Rapids ... 4168	Providence 5625
New Haven 4315	Saginaw Valley.. 3752	Springfield 4340
Chicago 4613	Hagerstown 4400	Rochester 4652
Milwaukee 4404	York 3506	Buffalo 4008
Cleveland 4660	Hampton Roads.. 4817	St. Louis 4894
Detroit 4169	Washington 3780	Rockford 3666
Dallas 4887	Jamestown 4616	Scranton 4944
Houston 4446	Youngstown 3881	Lehigh Valley ... 4563
Dayton 4497	Lancaster 4297	South Bend 4319
Tri-Cities 4224	Reading 3879	Calumet 3683
Denver 4064	Memphis 4433	Toledo 4601
Wichita 3525	Chattanooga 4211	Columbus 4319
Des Moines 4733	Newark 4894	Utica 4652
Cedar Rapids ... 3603	Brooklyn 4538	Binghampton 3188
Erie 4505	New Hampshire. 5247	Williamsport 4299
Akron 4205	Maine 4079	Harrisburg 3515
Evansville 4507	Peoria 4394	Worcester 4542
Wabash Valley ...3693	Decatur 4043	Cuba 3634

Regional Cost Conferences Planned

Los Angeles and St. Louis will be the scenes of two Regional Cost Conferences to be held in November, 1946. The Western Regional Cost Conference, sponsored by SAN FRANCISCO, DENVER, PORTLAND, HAWAII and LOS ANGELES Chapters, is scheduled for November 18 and 19, with the St. Louis Conference taking place October 31 and November 1. Preliminary reports indicate attendance will be high at each Conference.

Although tentative programs only have been announced at this time, organizational groundwork is being carefully prepared and excellent technical sessions are expected. Lester M. Kincaid, President of ST. LOUIS Chapter, and Professor Sam A. Marsh, of the School of Business and Public Administration of Washington University, are in charge of arrangements for the St. Louis Conference. Ernest D. Wright, Past President of LOS ANGELES Chapter, is Chairman of the Conference Committee for the Western Conference.

Regional Cost Conferences in Washington, Philadelphia, and Cleveland are being considered for the 1946-47 season as well. Plans, however, are still in the discussion stage.

IN THE PUBLIC EYE

Edmund S. LaRose, Past President of ROCHESTER Chapter and Controller and Director of Bausch & Lomb Optical Co., was the main speaker at the 25th annual meeting of the Canadian Society of Cost Accountants and Industrial Engineers. Title of his address was "Modern Technique for Budgeting and Controlling Current and Future Operations." Meeting was held in Niagara Falls, Ontario, Canada.

Maurice H. Baitler, Treasurer of SPRINGFIELD Chapter, 1945-46, retired recently as Assistant Treasurer and Director of the Perkins Machine & Gear Co. after nineteen years service. A farewell party was tendered him by his business associates.

J. S. Seidman, newly elected National Director of N. A. C. A., has resumed writing his articles on accounting and related problems in the Sunday *New York Herald-Tribune*. The articles were suspended during the war due to Seidman's service with the Navy.

James Dwyer, newly elected Vice President of NEW HAMPSHIRE Chapter, presided at a meeting of the New England Society of Certified Public Accountants recently.

Philip E. Feiner, PROVIDENCE, was recently appointed by Rhode Island's Governor to a five-man committee which is making a study of revenue plans for the State.

Lester Clark, MAINE, has been named Treasurer of the State Game and Fish Association.

HARTFORD Chapter continued to contribute the feature "Accounting Hints" to the publication "Connecticut Industry" during the past year. The feature is devoted to stimulating the use of better accounting techniques in industry.

CONGRATULATIONS TO . . . .

L. Clayton Hill of NEW YORK Chapter, one of the speakers at the 27th International Cost Conference, recently named Vice President of the American Management Association. Hill is Works Manager of the Eagle Pencil Co. of New York.

Clinton W. Bennett, National Vice President of N. A. C. A. and former President of BOSTON Chapter, chosen President of the Massachusetts Society of Certified Public Accountants.

Prior Sinclair, NEW YORK, named President of the New York State Society of Certified Public Accountants.

Stuart D. MacLaren, Past President of WORCESTER Chapter, elected President of the Boston Control of the Controllers Institute of America. *Victor A. Davis,* WORCESTER, was named Treasurer, and *Everett M. Hicks,* also WORCESTER, was elected a Director.

Ernest G. Maihack, NEWARK, who received the Gold Key Award of the Northern New Jersey Chapter of the Society for the Advancement of Management. The award is made annually to "a person selected as outstanding because of his contribution to service, in research, or for development work in the field of management."

Philip A. Becker and *Frederic R. Gould,* BUFFALO, chosen Directors of the Buffalo Junior Chamber of Commerce. Becker becomes Assistant Treasurer as well.

William R. Hunter, Publicity Director for DAYTON Chapter for the coming year, elected President of the Dayton Chapter of the Ohio Society of Certified Public Accountants. *Charles W. Barstow,* DAYTON, is the new Vice President, and *Frank L. Arnold,* also DAYTON, becomes a Director.

Charles F. Rittenhouse, Past President of BOSTON Chapter, who received an honorary LL. D. degree recently from Mt. Union College, Alliance, Ohio.

John W. Hooper, BROOKLYN, elected Vice President of the Brooklyn Chamber of Commerce. Hooper is Vice President and Treasurer of the American Machine & Foundry Co.

Helge I. Carlson and *Miss Signe V. Wigren,* both of WORCESTER, named Directors of the Worcester Chapter of the National Office Management Association.

Hiram T. Scovill, DECATUR Chapter, Acting Dean of the School of Commerce of the University of Illinois, honored recently with a Doctor of Laws degree from Illinois College "in recognition of his distinguished services in education and business affairs."

Walter W. Sandell, MINNEAPOLIS, named a Director of the National Confectioners Association.

Steve H. Bomar, Program Director of ATLANTA Chapter for 1945-46, elected President of the Atlanta Conference, National Association of Bank Auditors and Comptrollers.

William J. Bommelje, CEDAR RAPIDS, new Commander of the Furniture City Post of the American Legion.

J. Hugh Jackson, SAN FRANCISCO, Dean of the Graduate School of Business of Stanford University, appointed Dickinson Lecturer in Harvard University for the academic year 1946-47.

Allen E. Strand, PIEDMONT Chapter, elected President of the North Carolina Association of Public Accountants.

Carroll A. Dolan, SPRINGFIELD, chosen President of the Springfield Control of the Controllers Institute.

William G. Muchow, PITTSBURGH, elected Auditor of the Pittsburgh Chapter, Pennsylvania Institute of Certified Public Accountants. *Archibald F. Wagner* is a new member of the Executive Committee.

J. Raymond Jordan, HOUSTON, named Chairman of the Houston Chapter of the Texas Society of Certified Public Accountants.

D. L. Valentine, new President of MEMPHIS Chapter, elected a National Director of the National Retail Dry Goods Association.

John V. Bowser, PITTSBURGH, Assistant Auditor of the Westinghouse Airbrake Co., chosen President of the Pittsburgh Control of the Controllers Institute of America. *Edward J. Hanley,* National Director of N. A. C. A., *Charles R. Fay,* and *M. D. Wells* have been named Directors.

Grant R. Lohnes, DAYTON, member of N. A. C. A.'s Executive Committee, made an honorary member of the Ohio State University Chapter of Beta Alpha Psi, National Professional Accounting Fraternity.

Sherwin J. Thorne, BUFFALO, promoted from Assistant Treasurer to Treasurer and Secretary of the Buffalo Industrial Bank. Thorne returned recently from service in the Army.

Past President *Ben F. Jackson* of DETROIT Chapter, who has been made a partner of Price, Waterhouse & Co. Jackson moves to the firm's St. Louis office.

Lloyd H. Heineman, newly elected President of SCRANTON Chapter, advanced to the post of Secretary-Treasurer of the Scranton Electric Co.

George A. Potter, BUFFALO, formerly Controller of the Spencer Lens Division of the American Optical Co., promoted to the post of Manager of the Accounting Division of the American Optical Co.

Charles L. Johnson, Past President of GREENWICH Chapter, promoted to Treasurer and Assistant Secretary of the Hat Corporation of America, East Norwalk, Conn. Johnson has been with the corporation for 37 years.

Gilbert E. Delaney, DETROIT, named Assistant Treasurer of the Pfeiffer Brewing Co. of that city.

Floyd L. Wilmoth, PHILADELPHIA, advanced from Assistant Controller to Controller of the Fleetwing Division of Kaiser Cargo, Inc.

Keith J. Harris, former President of CHATTANOOGA Chapter, elected Vice President of the Ross-Meehan Foundries of that city.

Howard J. Cameron, BROOKLYN, named Executive Vice President of Rockwood & Co.

Edwin C. Alden, Past President of HARTFORD Chapter, elected Chairman of the Board of the States Co. *Heaton P. Blakeslee,* also HARTFORD, becomes President and Treasurer.

Jacob P. Nathan, SAN FRANCISCO, new Assistant Vice President of the Anglo California National Bank. Nathan had been Chief Accountant since 1940.

Leonard W. Stiegel, first President of TRI-CITIES Chapter, named Chairman of the Social Security Department of the Illinois Chamber of Commerce.

James J. Goldie, AKRON, advanced from Office Manager to Director of Administration of the General Tire & Rubber Co.

Harold W. Kreamer, TOLEDO, promoted from Assistant Treasurer to Treasurer of the Ohio Citizens Trust Co., that city.

H. Hayes Wunderlich, PITTSBURGH, appointed Assistant Controller of the Jones & Laughlin Steel Corp.

Paul Kalbach, READING, advanced from Office Manager to Treasurer of Infant Socks, Inc., that city.

Gerald Preshaw, former President of LOS ANGELES Chapter, elected Vice President and Treasurer of the Aerion Manufacturing Co. of Kansas City. Preshaw had been associated with the Chicago plant of the Douglas Aircraft Co.

The following deaths among N. A. C. A. members were reported during the month of June:

George A. Lindblade, Vice President of ROCKFORD Chapter, 1929-30 and 1930-31, and a member of N. A. C. A. since 1928. Mr. Lindblade was associated for many years with the Sundstrand Machine Tool Co. of Rockford as Secretary.

John Beale, 55, Treasurer of the YOUNGSTOWN Chapter, who served as Vice President of the Chapter, 1938-39 and 1940-41. Mr. Beale was associated with the Republic Steel Corp.

Frederik M. Haagensen, 47, EVANSVILLE Chapter, Comptroller of the S. J. Campbell Co. of Madisonville, Ky. Death was accidental.

Victor C. Miller, 53, NEW YORK, associated with the American Business Credit Corp. of that city.

IN BRIEF

GRAND RAPIDS Chapter attended a joint meeting June 19 with the American Society of Women Accountants. Discussion was on "Problems of Postwar Taxation." . . . Windsor Chapter, Society of Industrial and Cost Accountants of Ontario, entertained members of N. A. C. A.'s DETROIT Chapter recently at a golf party.

Dr. Charles T. Powers, SPRINGFIELD, founder and Director of the School of Business Administration of American International College, Springfield, is now Professor of Accounting at Bryant College, Providence.

HAWAII Chapter graciously donated ten cases of pineapple juice (native product, of course) for the enjoyment of the delegates at the recent International Cost Conference. Question is, what lucky persons actually sampled some? . . . . BRIDGEPORT recently held a meeting of its "Two-Spot" Club, an organization of former Chapter officers. . . . TRI-CITIES has its own Spot Club.